Applicant : Alex K. Kloth   Attorney's Docket No.: 12754-169001 / 2001P16199US
Serial No. : 10/052,793
Filed   : November 2, 2001
Page   : 2 of 14

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1.   (Currently amended) A data and telecommunications switch, comprising:

one or more input ports for receiving data from one or more input devices;

a router adapted to route said data to one or more output devices, said router including a
router table, the router table implemented as a DRAM and SRAM lookup table; and

a switch control unit for conducting a search of said SRAM and DRAM lookup table
when said data are received,

wherein conducting a search of said SRAM and DRAM lookup table includes searching
an SRAM portion for routing information,

wherein if routing information is found in the SRAM portion, no search is performed in
the DRAM portion, and

wherein if no routing information is found in the SRAM portion, searching a DRAM
portion of said SRAM and DRAM lookup table.

2.   (Canceled)

3.   (Currently amended) A data and telecommunications switch in accordance with
claim 1 [[2]], said lookup table search comprising an interval bisection search, wherein a
predetermined number of levels of said interval bisection search are stored in SRAM, and a
remaining number of levels are stored in DRAM.

4.   (Currently amended) A data and telecommunications switch in accordance with
claim 1 [[2]], said lookup table search comprising a binary tree search, wherein a predetermined

number of levels of said binary tree search are stored in SRAM, and a remaining number of levels are stored in DRAM.

5.   (Currently amended) A method, comprising:

receiving a data packet at an input port;

reading a header of said data packet for routing identification information;

using said routing identification information for accessing an SRAM portion of a routing table for routing information, and [[,]] if [[necessary,]] no entry corresponding to said routing identification information is found in said SRAM portion, accessing a DRAM portion of said routing table; and

routing said data packet using said routing information.

6.   (Original) A method in accordance with claim 5, wherein said accessing comprises performing an interval bisection search, wherein a predetermined number of levels of said interval bisection search are stored in SRAM, and a remaining number of levels are stored in DRAM.

7.   (Original) A method in accordance with claim 5, wherein said accessing comprises performing a binary tree search, wherein a predetermined number of levels of said binary tree search are stored in SRAM, and a remaining number of levels are stored in DRAM.

8.   (Currently amended) A method, comprising:

providing one or more input ports for receiving data from one or more input devices;

providing a router adapted to route said data to one or more output devices, said router including a router table, the router table implemented as a DRAM and SRAM lookup table; and

providing a switch control unit for conducting a search of said SRAM and DRAM lookup table when said data are received,

wherein conducting a search of said SRAM and DRAM lookup table includes searching an SRAM portion for routing information,

wherein if routing information is found in the SRAM portion, no search is performed in the DRAM portion, and

wherein if no routing information is found in the SRAM portion, searching a DRAM portion of said SRAM and DRAM lookup table.

9.   (Canceled)

10.   (Currently amended) A method in accordance with claim 8 [[9]], said lookup table search comprising an interval bisection search, wherein a predetermined number of levels of said interval bisection search are stored in SRAM, and a remaining number of levels are stored in DRAM.

11.   (Original) A method in accordance with claim 10, said lookup table search comprising a binary tree search, wherein a predetermined number of levels of said binary tree search are stored in SRAM, and a remaining number of levels are stored in DRAM.

12.   (Currently amended) A router for a data and telecommunications system, comprising:

a routing controller for reading routing identification information from incoming data packets;

and a routing table for storing routing information, said routing table having a DRAM portion and an SRAM cache, wherein said routing controller uses said routing identification information to access said routing table for said routing information,

wherein a first portion of a search of said routing table is conducted in said SRAM cache and a second portion is conducted in said DRAM portion, and

Applicant : Alex K. Kloth   Attorney's Docket No.: 12754-169001 / 2001P16199US
Serial No. : 10/052,793
Filed   : November 2, 2001
Page   : 5 of 14

wherein said second portion of said search is conducted only if no routing information is found in the SRAM portion.

13.   (Canceled)

14.   (Currently amended) A router in accordance with claim 12 [[13]], wherein said search comprises an interval bisection search.